



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/645,007 | 08/21/2003 | Hiroshi Ochiai | 36068 | 6221 |

116 7590 12/03/2004

PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER

VAN, QUANG T

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3742

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,007

Applicant(s)

OCHIAI ET AL.

Examiner

Quang T Van

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 and 7 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (US 2004/0070345). Yang discloses a noise filter of a high frequency generator comprising a choke coil (204) connected between cathode terminal (256a) and a capacitor (258), and cooperating with said capacitor (258) to form an LC filter circuit, wherein said choke coil (204) includes first (204a) and second (204c) core type inductors having respectively bar-like high-frequency absorbing members (202a, 202b) located within windings thereof, and air-core inductor (204b) not having a high-frequency absorbing member and connected to said cathode terminal (256a); said first core type inductor(204a), said second core type inductor (204c) and said air-core inductor (204b) are connected in series. However, Yang does not disclose said first core type inductor and said second core type inductor are arranged via a gap having a width within 1mm to 6mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange a first core type inductor and second core type inductor via a gap having a width within 1mm to 6mm. Doing so would provide a noise of a frequency band of 400MHz to 900MHz is attenuated.
3. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (US 2004/0070345) in view of Tashiro (US 3,922,612). Yang discloses substantially all

Art Unit: 3742

features of the claimed invention except frequency characteristics of said high-frequency absorbing members of said first and second core type inductors are different from each other. Tashiro discloses frequency characteristics of said high-frequency absorbing members of said first and second core type inductors are different from each other (col. 2, lines 48-58). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Yang frequency characteristics of said high-frequency absorbing members of said first and second core type inductors are different from each other as taught by Tashiro in order to improve the attenuation of noise of a frequency band of 500MHz to 700MHz.

4. Claims 6-7 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest said insulating material is made of a silicon rubber based material as recited in claim 6; and said high-frequency absorbing members of said first and second core type inductors are fixed within said windings of the first and second core type inductors by fixing means made of a silicone rubber based adhesive as recited in claim 7.

Response to Amendment

6. Applicant's arguments filed 10/14/04 have been fully considered but they are not persuasive.

Applicant argues "Yang does not teach where an air-core inductor is connected to a cathode" recited in "REMARKS/ARGUMENTS" page 7, line 18. The Examiner disagrees. Yang discloses an air-core inductor (204b) not having a high-frequency

absorbing member and indirectly connected to a cathode terminal (256a) through a first core type inductor (204a). Yang's air-core (204b) is not directly connected, but indirectly connected to the cathode terminal (256a).

Applicant also argues that "Tashiro does not teach a choke core type inductor is formed with a high-density wound type choke coil and the other core type inductor is formed with a low-density wound type choke coil" recited in "REMARKS/ARGUMENTS" page 8, lines 15-17. Yang does disclose the second core (204c) type inductor being more turns of coil lengths than the first core type (204a) inductor. Therefore, it is inherent that the second core type inductor is formed with a high-density wound type choke coil than the first core type choke coil.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 3742

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T Van whose telephone number is 703-306-9162. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QV

QV

November 29, 2004



Quang T Van
Primary Examiner
Art Unit 3742